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ABSTRACT OF THE DISCLOSURE

10 A layer-structured MPLS path is set up in a short
time by using a minimum number of control messages. A
relay apparatus acting as the start point of the highest-
layer L2 path creates a label request message specifying
the intermediate-point and end-point relay apparatuses
15 for all the paths of all the layers, and transmits it to
the end-point relay apparatus of the L2 path. At a relay
apparatus permitted to use an already established L1
path, instead of requesting a label of the L1 path, the
label of the already established path is inserted in the
label request message. In response to the label request
20 message, a label mapping message is transmitted and
transferred to the start-point relay apparatus. With
this message, each node determines the labels associated
with it and transfers them to its adjacent relay
apparatus.

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